

What is claimed is:

1. A snowboard binding interface assembly for mounting a snowboard binding to a snowboard, the interface assembly comprising:
  - a base plate coupled to the snowboard and having a plurality of recesses for receiving a locking device;
  - a stationary annular retaining ring rigidly coupled to said base plate;
  - a binding plate captured by said stationary annular retaining ring, said binding plate rotationally displaceable with respect to said stationary annular retaining ring;
  - a top plate coupled to said binding plate and to the snowboard binding;
  - and
  - a locking element, displaceable to engagingly lock said top plate to said base plate in one of a plurality of rotational positions.
2. The snowboard binding interface assembly according to claim 1 wherein the binding plate comprises a disk.
3. The snowboard binding interface assembly according to claim 1 wherein the stationary annular retaining ring has a lip that engages with an outer edge of the binding plate.
4. The snowboard binding interface assembly according to claim 3 wherein the lip comprises a chamfered edge having an angle  $\alpha$  and the binding plate has a chamfered outer edge having an angle  $\beta$ , where the sum of angle  $\alpha$  and angle  $\beta$  equal  $180^\circ$ .
5. The snowboard binding interface assembly according to claim 1 further comprising an outer ring located between said top plate and said base plate, said outer ring coupled to the top plate.

6. The snowboard binding interface assembly according to claim 1 wherein said locking element comprises a locking pin extending through the top plate, the locking pin engaging with one of a plurality of locking holes located in the base plate.
7. The snowboard binding interface assembly according to claim 6 wherein the locking pin is biased to an engaged position with one of the plurality of locking holes.
8. The snowboard binding interface assembly according to claim 6 wherein the locking holes are distributed around a circumference of the base plate.
9. The snowboard binding interface assembly according to claim 8 wherein the locking holes are angularly distributed around the base plate at no less than approximately five degree intervals.
10. The snowboard binding interface assembly according to claim 6 further comprising an alignment device for aligning the locking pin with one of the plurality of locking holes when selecting one of the plurality of rotational positions.
11. The snowboard binding interface assembly according to claim 10 wherein the stationary annular retaining ring is provided with a keyed outer edge and the alignment device comprises an alignment pin located in an outer ring coupled to the top plate, the alignment pin engaging with the keyed outer edge to selectively align the locking pin with one of the plurality of locking holes.

12. The snowboard binding interface assembly according to claim 6 wherein the locking pin is connected to one end of a leash which is provided to connect to a rider's leg.

13. The snowboard binding interface assembly according to claim 6 wherein the locking pin is keyed to maintain the locking pin in a locked position with one of the plurality of locking holes.

14. A method of adjusting a rotational position of a snowboard boot while in a snowboard binding comprising the steps of:

- positioning a snowboard binding interface between a snowboard and the snowboard binding;

- vertically displacing a locking mechanism on the snowboard binding interface to disengage the locking mechanism;

- rotating the snowboard boot to one of a plurality of rotational positions;

- aligning the locking mechanism with one of a plurality of locking holes provided in a base portion of the snowboard binding interface with an alignment device provided in the snowboard binding interface; and

- engaging the locking mechanism on a snowboard binding interface to rigidly maintain the selected rotational position of the snowboard boot relative to the snowboard.

15. The method according to claim 14 wherein the plurality of rotational positions are no less than approximately five degree rotational adjustments.

16. The method according to claim 14 wherein the locking mechanism is connected to one end of a leash which is provided to connect to a rider's leg.

17. The method according to claim 16 wherein the step of vertically displacing the locking mechanism is accomplished by pulling upward on the leash that is connected to the locking mechanism.

18. The method according to claim 14 wherein the locking mechanism is biased to a locked position.

19. A snowboard binding interface assembly for mounting between a snowboard binding and a snowboard, the interface assembly comprising:

a stationary annular retaining ring coupled to the snowboard, said annular retaining ring having an inner circumference ( $L_1$ );

a binding plate captured by said stationary annular retaining ring, said binding plate rotationally displaceable to a plurality of rotational positions with respect to said stationary annular retaining ring, said binding plate having an outer circumference ( $L_2$ ), where ( $L_2$ ) is greater than ( $L_1$ ); and

a top plate coupled between said binding plate and the snowboard binding, said top plate have an outer circumference ( $L_3$ ), where ( $L_3$ ) is greater than ( $L_2$ ).

20. The snowboard binding interface assembly according to claim 19 further comprising a locking element to lock said binding plate in one of the plurality of rotational positions.

21. The snowboard binding interface assembly according to claim 20 further comprising an alignment device for aligning the locking element with one of the plurality of rotational positions.

22. The snowboard binding interface assembly according to claim 21 further comprising a base plate coupled between the snowboard and said stationary annular retaining ring, said base plate having a plurality of recesses for receiving the locking element.

23. The snowboard binding interface assembly according to claim 22 further comprising an outer ring located between said top plate and said base plate, said outer ring coupled to the top plate.

24. The snowboard binding interface assembly according to claim 23 wherein the stationary annular retaining ring is provided with a keyed outer edge and the alignment device comprises an alignment pin located in the outer ring, the alignment pin engaging with the keyed outer edge to selectively align the locking pin with one of the plurality of recesses.

25. The snowboard binding interface assembly according to claim 22 the locking element is vertically displaceable to engagingly lock said top plate to said base plate in one of the plurality of rotational positions.

26. The snowboard binding interface assembly according to claim 22 wherein said locking element comprises a locking pin located in said top plate that engages with one of the plurality of recesses.

27. The snowboard binding interface assembly according to claim 26 wherein the locking pin is selectively biased to an engaged position with one of the plurality of recesses.

28. A snowboard binding interface assembly for mounting between a snowboard binding and a snowboard the interface assembly comprising:  
a stationary annular retaining ring coupled to the snowboard, said annular retaining ring having an inner circumference ( $L_1$ );  
a binding plate captured by said stationary annular retaining ring, said binding plate rotationally displaceable to a plurality of rotational positions with respect to said stationary annular retaining ring, said binding plate having an outer circumference ( $L_2$ ), where ( $L_2$ ) is greater than ( $L_1$ ), said binding plate having an outer circumference ( $L_3$ ); and

an outer ring captured by said stationary annular retaining ring, said outer ring having an inner circumference ( $L_4$ ), where ( $L_3$ ) is greater than ( $L_4$ ).

29. The snowboard binding interface according to claim 28 further comprising a locking mechanism to hold said binding plate at one of the plurality of rotational positions.

30. A snowboard binding interface assembly for mounting between a snowboard binding and a snowboard the interface assembly comprising:  
a stationary annular retaining ring coupled to the snowboard, said annular retaining ring having an inner chamfered edge having an angle  $\alpha$ ;  
a binding plate captured by said stationary annular retaining ring, said binding plate rotationally displaceable to a plurality of rotational positions with respect to said stationary annular retaining ring, said binding plate having a chamfered outer edge having an angle  $\beta$ , where the sum of angle  $\alpha$  and angle  $\beta$  equal  $180^\circ$ .

31. The snowboard binding interface assembly according to claim 30 further comprising a locking element to lock said binding plate in one of the plurality of rotational positions.

32. The snowboard binding interface assembly according to claim 31 further comprising an alignment device for aligning the locking element with one of the plurality of rotational positions.

33. A snowboard binding interface assembly for mounting between a snowboard binding and a snowboard the interface assembly comprising:  
a base plate coupled to the snowboard;  
a stationary annular retaining ring coupled to said base plate, said annular retaining ring having an inner circumference ( $L_1$ ); and

a binding plate captured by said stationary annular retaining ring, said binding plate rotationally displaceable to a plurality of rotational positions with respect to said stationary annular retaining ring, said binding plate having an outer circumference ( $L_2$ ), where ( $L_2$ ) is greater than ( $L_1$ ).

34. The snowboard binding interface assembly according to claim 33 further comprising a locking element to lock said binding plate in one of the plurality of rotational positions.

35. The snowboard binding interface assembly according to claim 34 further comprising an alignment device for aligning the locking element with one of the plurality of rotational positions.

36. The snowboard binding interface assembly according to claim 35 wherein said base plate has a plurality of recesses for receiving the locking element.

37. A snowboard binding interface assembly for mounting between a snowboard binding and a snowboard the interface assembly comprising:  
a first stationary portion coupled to the snowboard;  
a second moveable portion coupled to the snowboard binding, said second moveable portion being captured by said first stationary portion;  
a top plate coupled between said second moveable portion and the snowboard binding, said top plate being rotatable to one of a plurality of rotational positions.

38. The snowboard binding interface assembly according to claim 37 wherein said first stationary portion comprises a stationary annular retaining ring and said second moveable portion comprises a binding plate.

39. The snowboard binding interface assembly according to claim 38 wherein said annular retaining ring has an inner circumference ( $L_1$ ), and said binding plate has an outer circumference ( $L_2$ ), where ( $L_2$ ) is greater than ( $L_1$ ).

40. The snowboard binding interface assembly according to claim 39 wherein said top plate has an outer circumference ( $L_3$ ), where ( $L_3$ ) is greater than ( $L_2$ ).

41. The snowboard binding interface assembly according to claim 37 wherein said first stationary portion comprises a binding plate and said second moveable portion comprises an annular retaining ring.

42. The snowboard binding interface assembly according to claim 41 wherein said annular retaining ring has an inner circumference ( $L_1$ ), and said binding plate has an outer circumference ( $L_2$ ), where ( $L_2$ ) is greater than ( $L_1$ ).

43. The snowboard binding interface assembly according to claim 42 wherein said top plate has an outer circumference ( $L_3$ ), where ( $L_3$ ) is greater than ( $L_2$ ).

44. The snowboard binding interface assembly according to claim 37 wherein said first stationary portion has an inner chamfered edge having an angle  $\alpha$  and said second moveable portion has a chamfered outer edge having an angle  $\beta$ , where the sum of angle  $\alpha$  and angle  $\beta$  equal  $180^\circ$ .

45. The snowboard binding interface assembly according to claim 37 further comprising a locking element to lock said second moveable portion in one of the plurality of rotational positions.



46. The snowboard binding interface assembly according to claim 45 further comprising an alignment device for aligning the locking element with one of the plurality of rotational positions.

47. The snowboard binding interface assembly according to claim 37 wherein the snowboard binding interface assembly has a height (h) of approximately  $\frac{3}{4}$  of an inch.